1. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-3x+7} - \sqrt{8x+8} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x_1 \in [-2.89, -0.37]$ and $x_2 \in [0.33, 4.33]$

C. $x \in [1.09, 1.63]$

D. $x \in [-0.53, 0.06]$

E. $x_1 \in [-0.53, 0.06]$ and $x_2 \in [0.33, 4.33]$

---

2. What is the domain of the function below?

$$f(x) = \sqrt[7]{8x+9}$$

A. $(-\infty, \infty)$

B. The domain is $[a, \infty)$, where $a \in [-1.67, -1.11]$

C. The domain is $(-\infty, a]$, where $a \in [-2.68, -0.99]$

D. The domain is $[a, \infty)$, where $a \in [-0.9, -0.84]$

E. The domain is $(-\infty, a]$, where $a \in [-0.98, 0.99]$

---

3. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-63x^2 - 32} - \sqrt{92x} = 0$$

A. $x \in [-0.73, -0.31]$

B. $x_1 \in [-0.92, -0.72]$ and $x_2 \in [-2.57, 0.43]$

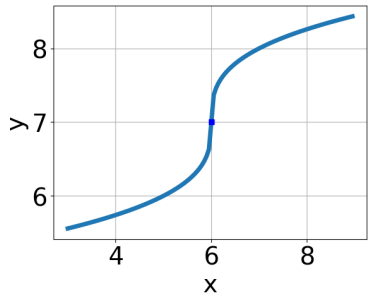
C. All solutions lead to invalid or complex values in the equation.

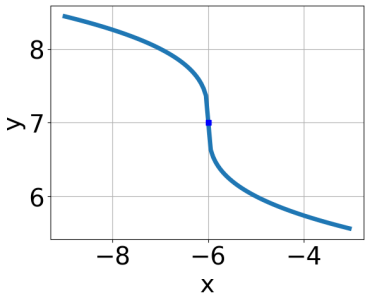
D. $x_1 \in [0.74, 1.27]$ and $x_2 \in [-0.43, 2.57]$

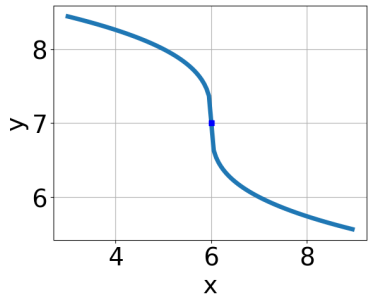
E. $x \in [-0.92, -0.72]$

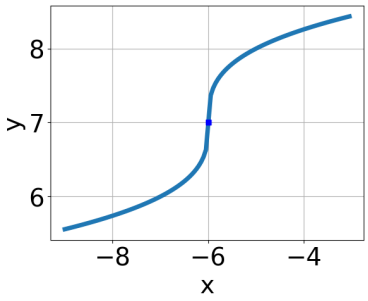
4. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x-6} + 7$$

A. 

C. 

B. 

D. 

E. None of the above.

5. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-15x^2 - 24} - \sqrt{49x} = 0$$

A. $x_1 \in [-3.5, -1.4]$ and $x_2 \in [-1.6, 0.4]$

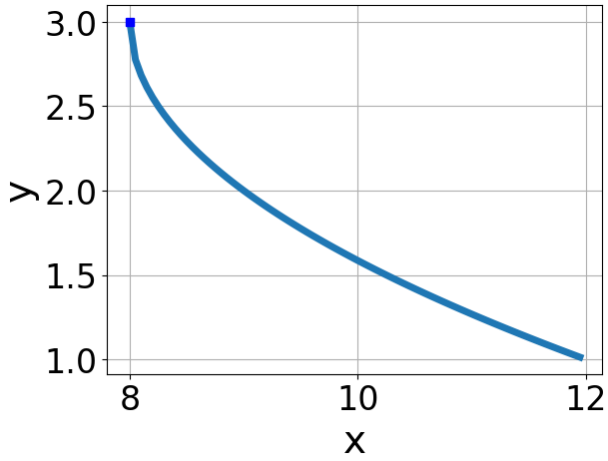
B. $x \in [-3.5, -1.4]$

C. $x \in [-1.2, -0.3]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [1.7, 5.2]$ and $x_2 \in [-0.4, 4.6]$

6. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x-8}+3$

B. $f(x) = -\sqrt{x-8}+3$

C. $f(x) = -\sqrt{x+8}+3$

D. $f(x) = \sqrt{x+8}+3$

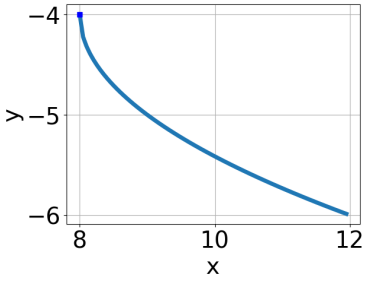
E. None of the above

---

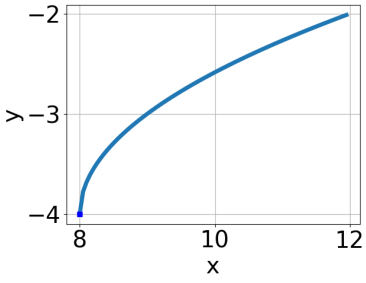
7. Choose the graph of the equation below.

$$f(x) = -\sqrt{x+8}-4$$

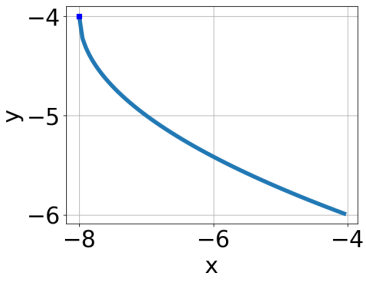
A.



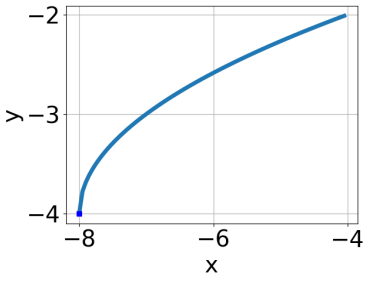
C.



B.

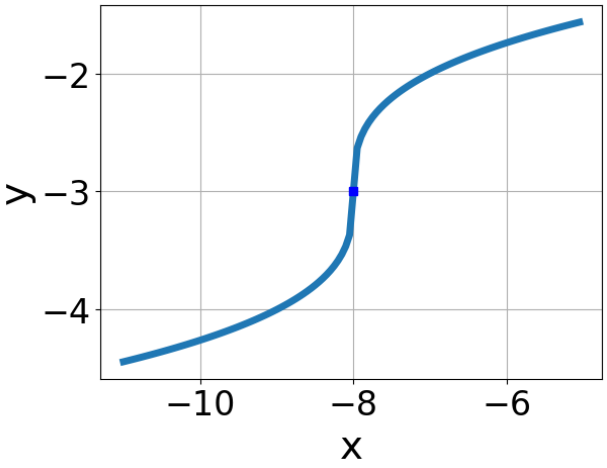


D.



E. None of the above.

8. Choose the equation of the function graphed below.



A. $f(x) = \sqrt{x+8} - 3$

B. $f(x) = -\sqrt{x-8} - 3$

C. $f(x) = \sqrt{x-8} - 3$

D. $f(x) = -\sqrt{x+8} - 3$

E. None of the above

9. What is the domain of the function below?

$$f(x) = \sqrt[6]{5x-8}$$

A. $(-\infty, \infty)$

B. $[a, \infty)$, where $a \in [-0.57, 0.71]$

C. $(-\infty, a]$, where $a \in [1, 1.75]$

D. $[a, \infty)$, where $a \in [0.88, 2.21]$

E. $(-\infty, a]$, where $a \in [0.56, 1.32]$

10. Solve the radical equation below. Then, choose the interval(s) that the

solution(s) belongs to.

$$\sqrt{-6x-5}-\sqrt{9x-4}=0$$

A. $x \in [-0.47, 0.01]$

B. $x \in [-0.63, -0.23]$

C. $x_1 \in [-0.87, -0.76]$ and $x_2 \in [0.25, 0.5]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [-0.87, -0.76]$ and $x_2 \in [-1.44, 0.22]$

---

11. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-7x+8}-\sqrt{4x+4}=0$$

A. $x \in [0.69, 2.16]$

B. $x_1 \in [-0.38, 0.45]$ and $x_2 \in [-1.86, 2.14]$

C. $x_1 \in [-1.05, -0.37]$ and $x_2 \in [-1.86, 2.14]$

D. $x \in [-0.38, 0.45]$

E. All solutions lead to invalid or complex values in the equation.

---

12. What is the domain of the function below?

$$f(x)=\sqrt[6]{-3x+8}$$

A. $[a, \infty)$, where $a \in [0.8, 5.1]$

B. $[a, \infty)$, where $a \in [-0.1, 0.6]$

C. $(-\infty, \infty)$

D. $(-\infty, a]$, where $a \in [-1.6, 2.6]$

E. $(-\infty, a]$, where $a \in [0.5, 4.4]$

---

13. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{12x^2+48}-\sqrt{50x}=0$$

A. $x \in [2.6, 4]$

B. $x_1 \in [-5.1, -1.3]$ and $x_2 \in [-2.5, -0.5]$

C. $x \in [1.2, 2.6]$

D. All solutions lead to invalid or complex values in the equation.

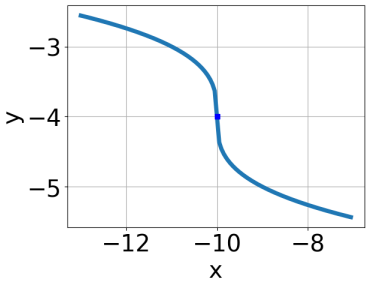
E. $x_1 \in [1.2, 2.6]$ and $x_2 \in [0.67, 10.67]$

---

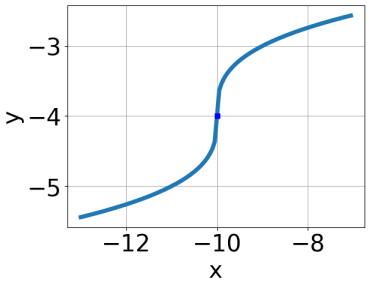
14. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x+10}-4$$

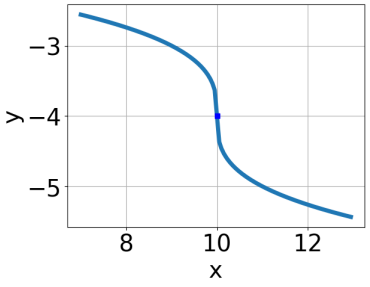
A.



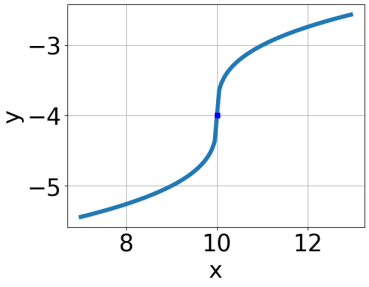
C.



B.



D.



E. None of the above.

---

15. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-18x^2-18}-\sqrt{85x}=0$$

A. $x \in [-1.22, 0.78]$

B. $x_1 \in [2.5, 9.5]$ and $x_2 \in [0.13, 1.08]$

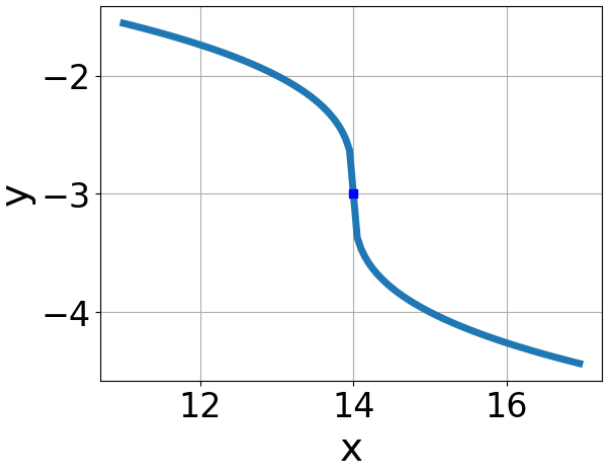
C. All solutions lead to invalid or complex values in the equation.

D. $x_1 \in [-5.5, -2.5]$ and $x_2 \in [-0.33, -0.17]$

E. $x \in [-5.5, -2.5]$

---

16. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x+14} - 3$

B. $f(x) = \sqrt[3]{x-14} - 3$

C. $f(x) = -\sqrt[3]{x+14} - 3$

D. $f(x) = -\sqrt[3]{x-14} - 3$

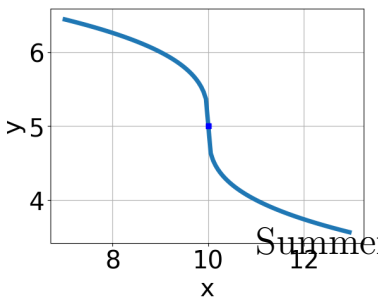
E. None of the above

---

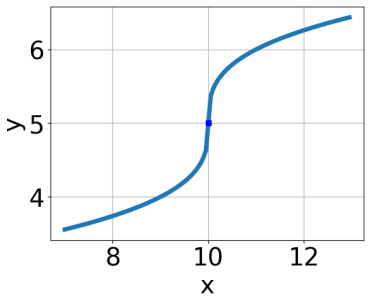
17. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x-10} + 5$$

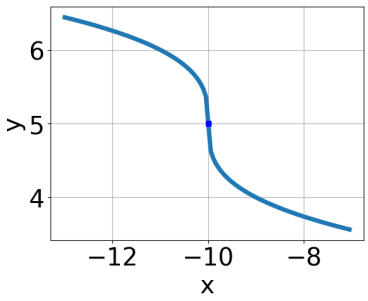
A.



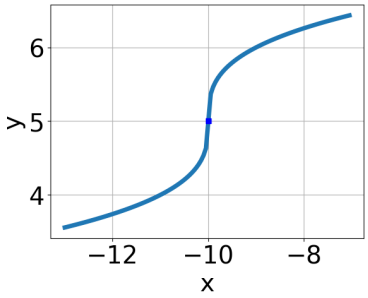
B.



D.



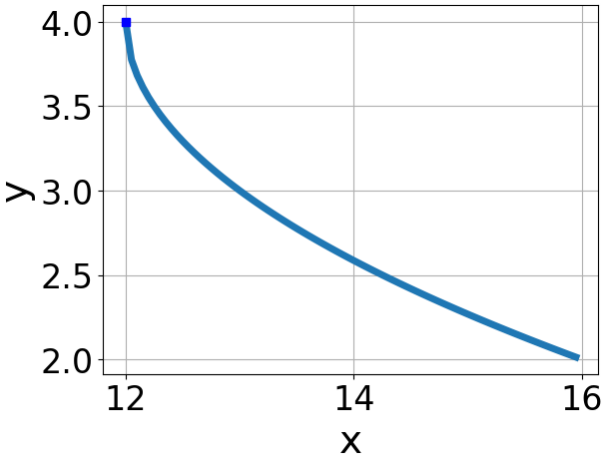
C.



E. None of the above.

---

18. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x+12} + 4$

B. $f(x) = \sqrt[3]{x-12} + 4$

C. $f(x) = -\sqrt[3]{x+12} + 4$

D. $f(x) = -\sqrt[3]{x-12} + 4$

E. None of the above

19. What is the domain of the function below?

$$f(x) = \sqrt[3]{7x+6}$$

A. The domain is $[a, \infty)$, where $a \in [-1.06, -0.52]$

B. $(-\infty, \infty)$

C. The domain is $(-\infty, a]$, where $a \in [-1.11, 0.26]$

D. The domain is $[a, \infty)$, where $a \in [-1.29, -1.11]$

E. The domain is $(-\infty, a]$, where $a \in [-2.33, -0.99]$

20. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{9x+6} - \sqrt{-2x+9} = 0$$

A. $x \in [-0.29, 0.79]$

B. All solutions lead to invalid or complex values in the equation.

C. $x_1 \in [-0.99, -0.24]$ and $x_2 \in [-4.73, 1.27]$

D. $x \in [-1.41, -1.07]$

E. $x_1 \in [-0.99, -0.24]$ and $x_2 \in [4.5, 5.5]$

21. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-9x-4} - \sqrt{2x+6} = 0$$

A. $x_1 \in [-3.1, -2.7]$ and $x_2 \in [-3.44, 0.56]$

B. $x_1 \in [-1.5, -0.2]$ and $x_2 \in [-3.44, 0.56]$

C. All solutions lead to invalid or complex values in the equation.

D. $x \in [-1.5, -0.2]$

E. $x \in [-0.3, 3.1]$

---

22. What is the domain of the function below?

$$f(x) = \sqrt[4]{-4x - 6}$$

A. $(-\infty, \infty)$

B. $[a, \infty)$, where $a \in [-2.7, -1.18]$

C. $[a, \infty)$, where $a \in [-0.7, -0.39]$

D. $(-\infty, a]$, where $a \in [-1.8, -1.31]$

E. $(-\infty, a]$, where $a \in [-1.12, -0.53]$

---

23. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{45x^2 + 20} - \sqrt{-65x} = 0$$

A. $x_1 \in [0.44, 1.88]$ and $x_2 \in [0.6, 3.1]$

B. $x \in [-0.67, -0.35]$

C. $x_1 \in [-1.79, -0.82]$ and $x_2 \in [-1.4, 0.3]$

D. $x \in [-1.79, -0.82]$

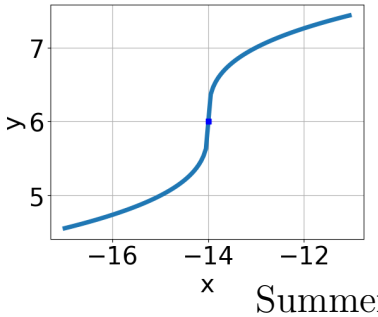
E. All solutions lead to invalid or complex values in the equation.

---

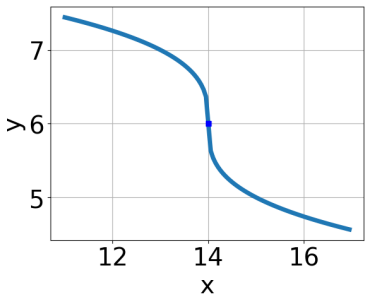
24. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x - 14} + 6$$

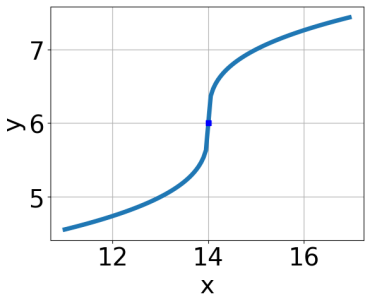
A.



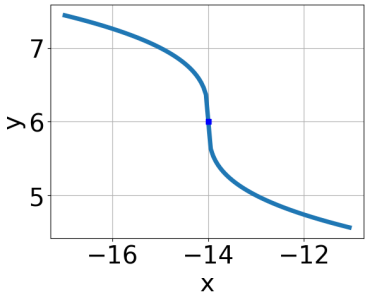
B.



D.



C.



E. None of the above.

---

25. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-18x^2 + 49} - \sqrt{-49x} = 0$$

A. $x \in [-1.7, 0.4]$

B. All solutions lead to invalid or complex values in the equation.

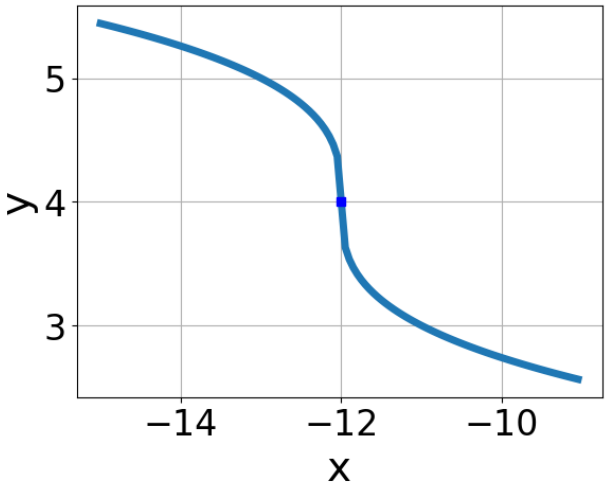
C. $x \in [2.3, 3.8]$

D. $x_1 \in [-1.7, 0.4]$ and $x_2 \in [1.5, 6.5]$

E. $x_1 \in [-0.3, 3.2]$ and $x_2 \in [1.5, 6.5]$

---

26. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x+12}+4$

B. $f(x) = -\sqrt[3]{x+12}+4$

C. $f(x) = \sqrt[3]{x-12}+4$

D. $f(x) = -\sqrt[3]{x-12}+4$

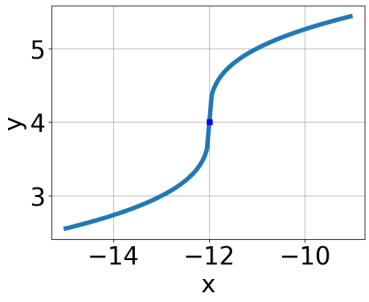
E. None of the above

---

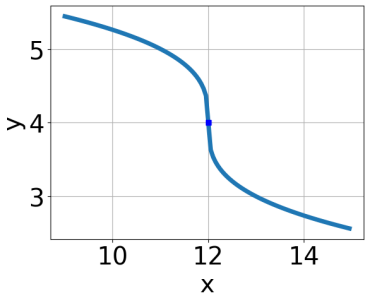
27. Choose the graph of the equation below.

$$f(x) = \sqrt[3]{x-12}+4$$

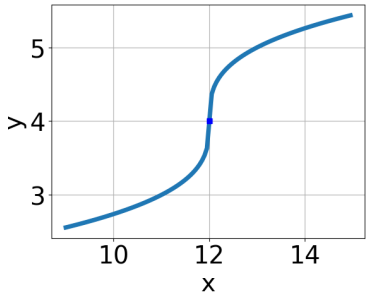
A.



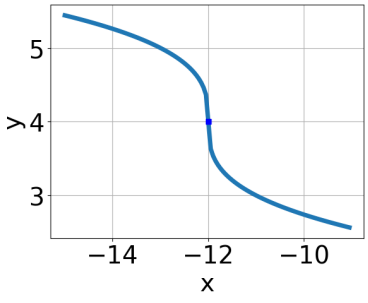
C.



B.



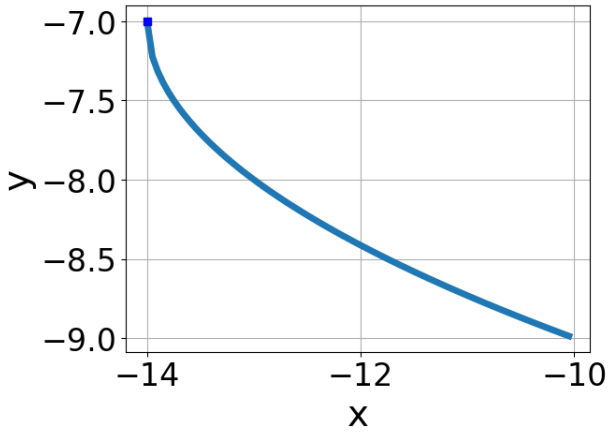
D.



E. None of the above.

---

28. Choose the equation of the function graphed below.



A. $f(x) = \sqrt[3]{x - 14} - 7$

B. $f(x) = -\sqrt[3]{x - 14} - 7$

C. $f(x) = -\sqrt[3]{x + 14} - 7$

D. $f(x) = \sqrt[3]{x + 14} - 7$

E. None of the above

---

29. What is the domain of the function below?

$$f(x) = \sqrt[5]{3x + 7}$$

A. The domain is $[a, \infty)$, where $a \in [-0.5, 1]$

B. The domain is $(-\infty, a]$, where $a \in [-0.7, 0.9]$

C. The domain is $(-\infty, a]$, where $a \in [-5.8, -0.6]$

D. The domain is $[a, \infty)$, where $a \in [-2.9, -1.3]$

E. $(-\infty, \infty)$

---

30. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-9x-9} - \sqrt{-4x-6} = 0$$

A. $x_1 \in [-1.15, -0.99]$ and $x_2 \in [-0.73, -0.58]$

B. $x \in [-0.78, -0.39]$

C. All solutions lead to invalid or complex values in the equation.

D. $x \in [-3.16, -2.81]$

E. $x_1 \in [-2.25, -1.35]$ and $x_2 \in [-1.14, -0.7]$